

## Abstract

At least one of two slab waveguides constituting an arrayed waveguide grating is cut and separated together with a substrate on a cross separating face (8). A slide moving member (17) is arranged over a waveguide forming area formed on the substrate including the separating slab waveguide (3a) and a waveguide forming area formed on the substrate including the separating slab waveguide (3b). Temperature dependence of the center wavelength of the arrayed waveguide grating is reduced by slide-moving the separating slab waveguide (3a) by the slide moving member (17) along the cross separating face (8) dependently on temperature. The shift of an initial center wavelength is corrected by plastically deforming the slide moving member (17) so that the initial center wavelength is conformed to a grid wavelength.